

# Education

GPA: 3.76/4.00

Bachelor of Science in Statistics and Machine Learning with University Honors

#### Relevant Courses

Intro to Machine Learning (PhD), Probabilistic Graphical Models (PhD), Causal Inference (PhD), Algorithms and Advanced Data Structures

## Work Experience

• Made a machine learning model to predict the exon skipping efficiency of antisense-oligonucleotides (ASOs) and then built a corresponding app to recommend optimal ASOs for specific exon skipping tasks.

Teaching Assistant for 10-701 Intro Machine Learning (PhD) ..... January 2020 – May 2020

• Led recitations, created homework problems, held office hours, and advised final projects for the PhD version of the intro to machine learning class at Carnegie Mellon.

• Built and later sold (to Ikos) an app that would predict how much property rentals across Pittsburgh would rent for and how quickly they would rent.

Quantitative Trading Intern at Virtu Financial . . . . . . . . . . . . . June 2019 – August 2019

• Worked on the algorithms team at a high frequency trading firm to predict Exchange Traded Fund (ETF) price fluctuations and alter trading strategies to profit from them.

### **Projects & Activities**

Computational Biology Researcher with Professor Jian Ma . . . . . . . . . May 2019 – May 2020

• Developed methods for learning the structure of a multiDAG network embedded within a hidden Markov model where each hidden state in the HMM corresponded to a possible cell lineage.

Carnegie Mellon Racing System Lead for Car Pedals . . . . . . . . September 2017 – January 2019

- Designed the car's pedals in Solidworks and simulated forces applied to the pedals with FEA.
- Placed 1st in the 2018 Formula SAE Electric Vehicle Competition.

• Trained a neural network on grandmaster chess games to replicate Stockfish's scoring algorithm. The AI parsed possible moves with minimax search and then evaluated moves using the neural network.

- Built prototype that used silicon photomultiplier arrays paired with organic scintillators to determine the trajectory of cosmic ray muons, reducing the costs of muon tomography.
- Placed 3rd in Physics and Astronomy at Intel International Science and Engineering Fair.

### Skills & Interests

Skills: Python, C, R, SQL, Tableau, Javascript, HTML/CSS, Matlab, CAD, Unity, Microsoft Excel Interests: Data Science, Artificial Intelligence, Statistical Inference, Bioinformatics, Computer Vision